

## **RESPONSE**

Claims 1 - 13 remain in this application. Claims 1 - 13 have been rejected.

**The rejection of Claims 1 – 13 under 35 U.S.C. 103(a) as being unpatentable over King (GB 2,382,071) in view of Wittwer (U.S. Patent No. 3,435,978) is respectfully traversed.**

In establishing a prima facie case of obviousness, three criteria must be met:

- i. Some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; and
- ii. A reasonable expectation of success; and
- iii. The prior art reference (or references when combined) must teach or suggest all the claim limitations.

MPEP § 2143.

With respect to Claim 1, the Examiner takes the position that King '071 discloses a threaded container closure assembly (FIG. 1) comprising a container neck (10) having an opening; a closure (12) for said neck, the closure having a base portion (14) and a skirt portion (16); a first screw thread (18) on the neck, said first screw thread comprising one or more first thread segments, and a second screw thread (20) on an inner surface of the skirt of the closure, said second screw thread comprising one or more second thread segments define a continuous helical thread path along which said closure travels from a fully disengaged to a fully secured position of the closure on the container neck and

being configured to enable a user to secure remove and resecure the closure into a sealing position on the neck by rotation of the closure on the neck.

The Examiner however states that King '071 does not disclose a first locking projection on the container neck separate from the first thread segments and a second locking projection on the inner surface of the skirt of the closure separate from the second thread segments, said first and second locking projections being configured to resist unscrewing of the closure from the fully engaged position on the container neck after the closure has been secured or resecured on the container neck until a predetermined minimum opening torque is applied; wherein said first and second locking projections longitudinally overlap the first of the second thread segments when the closure is in the fully engaged position on the container neck; the height of said locking projection is such that a radially innermost vertex of the second locking element rides over a radially outermost vertex of the first locking element as the fully secured position is reached and the first locking projection is located longitudinally overlapping with and circumferentially spaced from an upper end of a first thread segment and define an extension of the thread path.

With respect to Wittwer, the Examiner takes the position that Wittwer teaches a first locking projection (14/17) on the container neck separate from the first thread segments and a second locking projection on the inner surface of the skirt of the closure separate from the second thread segments, said first and second

locking projections being configured to resist unscrewing of the closure from the fully engaged position on the container neck after the closure has been secured or resecured on the container neck until a predetermined unscrewing opening torque is applied; wherein the first and second locking projection longitudinally overlap the first of the second thread segments when the closure is in the fully engaged position on the container neck and whereby a radially innermost vertex of the second locking element rides over a radially outmost vertex of the first locking element as the fully secured position is reached and the first locking projection is located longitudinally overlapping with and circumferentially spaced from an upper end of the first thread segment and define an extension of the thread path. Therefore, the Examiner believes that it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify King '071 to include locking projections, as taught by Witter, in order to prevent the cap from unscrewing.

The Applicant submits that the threaded container closure assembly of the subject invention is structurally and functionally different than the closure of either of the cited references. Claim 1, provides:

A threaded container closure assembly, said assembly comprising:  
a container neck having an opening;  
a closure for said neck, the closure having a base portion and a skirt portion;  
a first screw thread on the neck, said first screw thread comprising one or more first thread segments, and a second screw thread on an inner surface of the skirt of the closure, said second screw thread comprising one or more second thread segments define a continuous helical thread path along which said closure travels from a fully disengaged to a fully secured position of the closure

on the container neck and being configured to enable a user to secure, remove and resecure the closure into a sealing position on the neck by rotation of the closure on the neck;

**a first locking projection on the container neck** separate from the first thread segments and **a second locking projection on the inner surface of the skirt** of the closure separate from the second thread segments, said first and second locking projections being configured to resist unscrewing of the closure from the fully engaged position on the container neck after the closure has been secured or resecured on the container neck until a predetermined **unscrewing opening torque is applied**;

wherein said first and second locking projections longitudinally overlap the first or the second thread segments when the closure is in the fully engaged position on the container neck;

**the height of said locking projections is such that the radially innermost vertex of the second locking element rides over a radially outermost vertex of the first locking element as the fully secured position is reached**; and

the first locking projection is located longitudinally overlapping with and circumferentially spaced from an upper end of a first thread segment, or said second locking projection is located longitudinally overlapping with and circumferentially spaced from a lower end of a second thread segment, whereby the said first or second locking projections define an extension of the thread path defined by the thread segments on the neck or the closure.

With respect to Wittwer, the Applicant agrees with the Examiner's position that Wittwer shows a first locking projection (FIG. 8) formed from a spur (17) extending from a guide (14) that rides into a detent (18). It appears that the Examiner is defining the second locking projection to be thread (2). However, as stated in Claim 1, the **"innermost vertex of the second locking element rides over a radially outermost vertex of the first locking element."** The Applicant is unable to find any radially innermost vertex of a second locking element or a radially outermost vertex of a first locking element in Wittwer or that the second locking element rides over a radially outermost vertex of the first locking element. Accordingly, the locking system of Wittwer is structurally and functionally different

that the locking system of the subject application.

In addition, the complementary locking projections on the neck and closure to provide a snap-fitting and a clearly audible click as the fully secured position of the closure on the neck is reached. In contrast, the locking elements of Wittwer (guide (14), spur (17), and detent (18)) are structurally and functionally different than the locking projections of the subject invention and there is no teaching or suggestion that the locking device of Wittwer would create a clearly audible click when closure is achieved.

Thus, the closure assembly of the subject invention is structurally and functionally different than the closure of King '071 and the locking projections creating a snap-fit, whereby the vertex of the second locking projection rides over the vertex of the first locking projection, are structurally and functionally different than the closure of Wittwer. Thus, even if there was some motivation to combine the cited references, such a combination would still result in a closure that was functionally and structurally different than the closure of the subject application.

Claim 2 provides:

A container closure assembly according to claim 1, wherein the first and/or second locking projections have sufficient strength to snap over each other without permanent deformation

The Applicant respectfully restates the arguments made above and respectfully

submits that unlike the projections 44/46 of the subject application there is no disclosure or teaching of first and second locking projections in King '071 nor Wittwer nor that the locking devices have sufficient strength to **snap over** each other without permanent deformation or that such strength is necessary or desirable. With respect to King '071 locking ribs (36) cooperate with ramps (38) such that they abut when the closure is fully engaged. With respect to Wittwer there is no showing of a locking device having projections that snap over each other. Accordingly, the closures of King '071 and Wittwer are structurally and functionally different than the closure of the subject application. Further with respect to Wittwer, the Examiner refers to Col. 4, lines 10 – 13 to show that Wittwer teaches first and second locking projections having sufficient strength to snap over each other without permanent deformation. However, as previously stated there is no showing in Wittwer of first and second locking projections that snap over each other. Indeed, Col. 4, lines 9 - 13 of Wittwer states:

“The above configurations function best when at least one of the interlocking threads is composed of resilient material, compatible with the varying degrees of deformation resulting when the junctions are tightened.”

Again, there is no teaching of projections that ride over one another or that the first and second locking projections comprise resilient material.

Regarding Claim 3, the Examiner takes the position that Wittwer teaches locking

projections with a ratio of the maximum height to the maximum width is at least 0.5 (FIG. 8). The Applicant restates the arguments made above with respect to Claims 1 and 2. The Applicant further submits that he is unable to find any teaching in Wittner that the locking projections have a ration of the maximum height to the maximum width of at least 0.5. Accordingly King '071 in view of Wittwer does not teach or suggest the claimed invention.

With respect to the rejections of Claims 4 – 13, the Applicant restates the arguments made with respect to independent Claim 1. Accordingly, Claims 4 – 13 that depend on independent Claim 1 are not rendered obvious in view of the cited references.

### **Conclusion:**

The Applicant restates the arguments made above with respect to independent Claim 1. As shown above, the cited references are structurally and functionally different that the closure of the subject invention. The structure and operation of the locking projections of Wittwer are substantially different than those of the subject invention. As previously stated, the locking projections of Wittwer operate by sliding past one another, and not by riding over one another as specified in Claim 1. In addition, most embodiments of Wittwer involve a locking element situated below the threads. There is also no showing that the locking projections of Wittwer will provide the assemblies of Wittwer with the audio “click” when the closed and sealing position is reached, or that they are suitable for

repeated opening and closing of the assemblies without deformation of the locking projections. Further, the Examiner apparently takes the position that the detent (17) of Wittwer reads onto one of the locking projections of the subject application. The Applicant however respectfully submits that Claim 1 specifies that a radially innermost vertex of the second locking projection rides over a radially outermost vertex of the first locking projection as the fully secured position is reached. In contrast, the cap thread of Wittwer (FIG. 8) rides past, not over the detent (17). Moreover, Wittwer does not disclose two locking projections each having a well defined vertex.

Accordingly, the Applicant can see no reason as to why one would find it beneficial that considering all of the prior art for closures, one would find it beneficial to combine the two cited references and then modify them along the lines of the subject invention. Even if the two references were combined, the resulting closure would be structurally and functionally different than the claimed subject invention.

The Examiner fails to show the motivation to combine the cited references and to select and structure the apparatus in such a way as to create the claimed invention. Even if all of the elements of the claim are disclosed in the cited references, the claimed invention taken as a whole cannot be said to be obvious without some reason given in the prior art as to why one of ordinary skill would have been prompted to combine the teachings of the references in such a way



as to arrive at the claimed invention.

The Applicant submits that the only teaching of the benefits of combining the subject references to arrive at the claimed invention comes from the Applicant's own specification. Therefore, the combination of references does not teach or suggest all the claim limitations of Applicant's independent Claim 1. Indeed, the cited references do not contain any suggestion or motivation, either in the references themselves or in the knowledge generally available to one skilled in the art to combine and modify the reference **and the Examiner has not provided any showing of such motivation or teaching.** Because neither reference contains any teaching, motivation, or suggestion for modifying the disclosed devices along the lines of the subject invention the Examiner has not shown a prima facie case of obviousness with respect to Applicants' independent Claim 1.

In view of the foregoing Amendment and Remarks, Applicants respectfully request reconsideration of the Application and that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

October 12, 2010

A handwritten signature in black ink, appearing to read "Mark F. Smith". The signature is fluid and cursive, with the first name "Mark" and last name "Smith" clearly distinguishable.

Mark F. Smith  
Attorney of Record  
(Reg. No. 32,437)

**Smith Brandenburg Ltd.**  
905 Ohio-Pike  
Cincinnati, Ohio 45245  
(513) 752-5350 (Phone/Fax)  
[marks@sbtechnologylaw.com](mailto:marks@sbtechnologylaw.com) (Email)